UI Bulletin 102d

Subject:	Auxiliary Battery Connections
Models Years Affected:	2007- and beyond
Models Affected:	Chevrolet Express/GMC Savana Cutaway
Origination Date:	03/06/2012
Revision Date:	6/2/2016

ADVISORY:

Condition/Concern:

Frequent field issues have been encountered with systems that move the OEM under-hood battery. Issues such as frequent Diagnostic trouble codes, improper transmission controller operation [rough shifting and clutch slip problems] as well as intermittent no crank issues have been reported. In many cases, the issue is resolved by restoring the OEM battery and cables to factory arrangement.

Repair/Recommendation:

Relocation of the OEM under-hood battery should be avoided whenever possible. The following guidelines are offered for issue resolution.

1. For 2016 and newer units, the GM recommended auxiliary battery configuration is the factory option TP2 - Battery, 600 cold-cranking amps primary, isolated 2nd heavy-duty 770 cold-cranking amps which allows 2nd battery to be used when the vehicle is not running without affecting ability to start the vehicle.
2. If remote batteries are required [ex: tray batteries] – see 'additional Information' below.

Additional Information:

Batteries may be located outside the engine compartment. When this is done the following is recommended:

- **Negative cable recommendations**:
  [a] The first and "most recommended" method for remote battery negative cabling is a jumper cable between the battery terminals with a single 'home run' cable directly to the engine block.

  [b] An alternate - less recommended - method is using the frame as part of the negative cable path. When this is done it is essential that appropriate sized cables are used. The

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cable from the tray battery negative terminals to the frame and the cable from the frame to the engine block [or a transmission-to-engine mounting bolt] should be the same gauge.

[c] Welded studs - added to the frame - are recommended for the two required connection points. [The frame bolt-clamping connection method presents multiple failure modes and is not recommended.]

[d] The OEM negative battery cable will be too small for re-purposing to this task.

Note:
It is essential that the negative ground return path is not compromised. Merely grounding the tray batteries to the frame WILL NOT WORK. Extra care must be used to assure adequate current flow path to the engine/transmission castings. The high current path is from the battery negative terminal to the starter motor casting. The engine block is main ground and the frame and body are secondary. The OEM frame grounding is not sufficient if the frame is used as 'part of the negative battery cable.' and the additional cable to the engine/trans casting is required for this case. The body grounding cable must be maintained in all cases.

- **Positive cable recommendation**.
  [a] The first and "most recommended" method for remote battery positive cables is a jumper between the battery terminals with a single main 'home run' cable to the starter motor solenoid terminal.

  [b] Connections to generators and main electrical center should be made at the starter motor solenoid [most recommended].

  [c] If the stacking of multiple cables on the starter solenoid stud is a problem a single main cable to a junction block may be indicated. The junction block can facilitate the required connections for the generator[s] and main electrical center.

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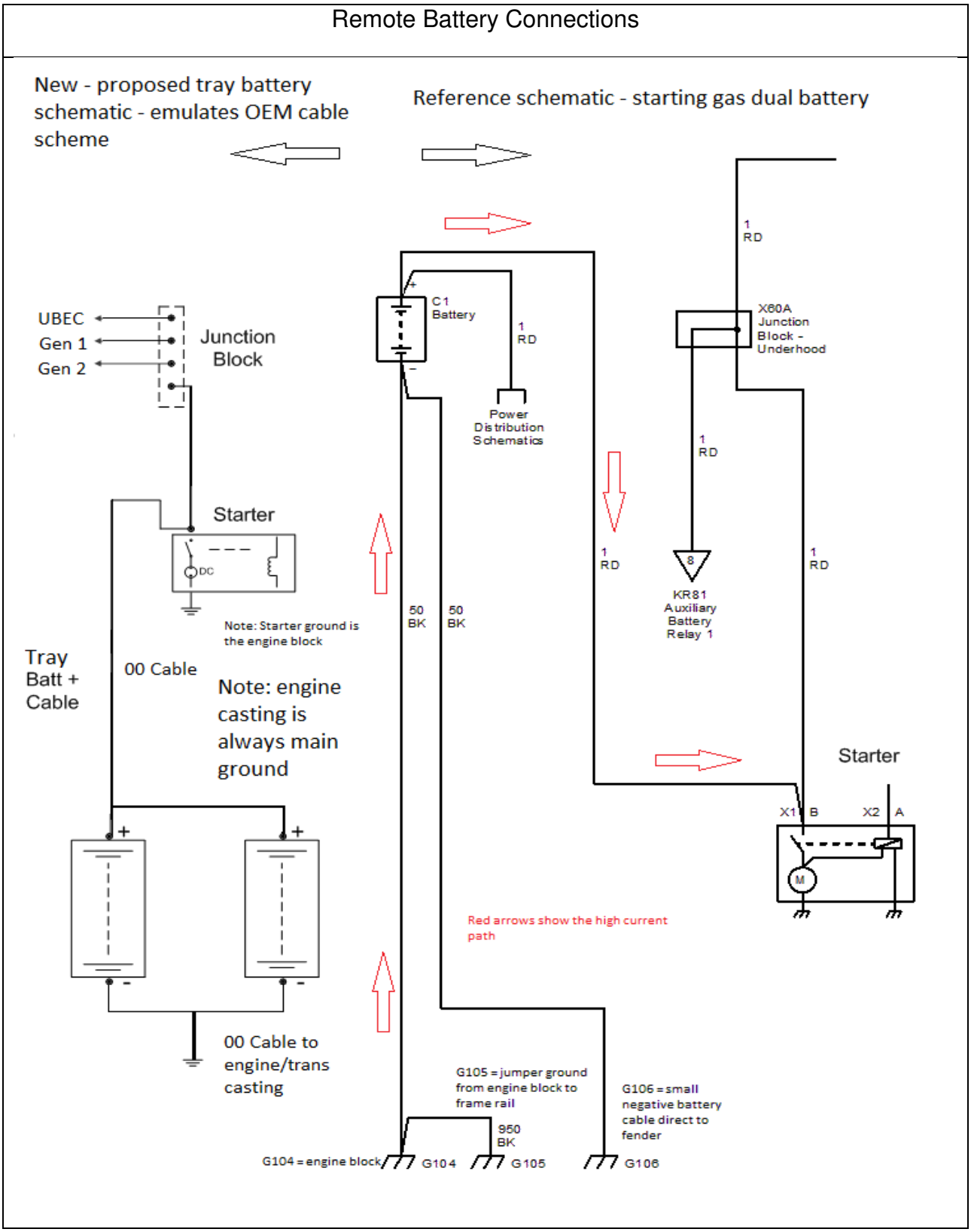
Remote Battery Connections



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